

**METHOD AND APPARATUS FOR PILOT FUEL INTRODUCTION  
AND CONTROLLING COMBUSTION IN GASEOUS-FUELLED  
INTERNAL COMBUSTION ENGINE**

A method and apparatus for introducing pilot fuel into a piston cylinder of an operating gaseous fuelled internal combustion engine monitoring a set of engine parameters, determining engine load and engine speed from the set of engine parameters, introducing a first portion of the gaseous fuel into the cylinder where the first portion of gaseous fuel forms a substantially homogeneous mixture comprising gaseous fuel and air prior to combustion, and introducing a pilot fuel to avoid a excessive knocking range for the engine. A second quantity of gaseous fuel can also be added to burn in a substantially diffusion combustion mode.